

CLAIMS

1. A pneumatic tire comprising
a tread portion with a pair of tread edges,
a tire shoulder extending radially inwardly from one of the tread edges, provided with a curved surface comprising a convex curve,
on a cylindrical surface centered on the tire axis and intersecting said curved surface, said convex curve swelling axially outwards and having a curvature, the curvature gradually diminishing towards the radially inside from the tread edge.
2. The pneumatic tire according to claim 1, wherein
said curved surface consists of said convex curve, and
said at least one of the tire shoulders is provided with a plurality of said curved surfaces arranged in the circumferential direction.
3. The pneumatic tire according to claim 1, wherein
said curved surface comprises a plurality of said convex curves and a plurality of convex curves alternating therewith, whereby the curved surface is waved in the tire circumferential direction.
4. The pneumatic tire according to claim 1, wherein
said tread portion is provided along at least one of the tread edges with blocks each with said curved surface consisting of said convex curve.
5. The pneumatic tire according to claim 1, wherein

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said tread portion is provided along at least one of the tread edges with a circumferential rib with said curved surface, the curved surface comprises a plurality of said convex curves and a plurality of convex curves alternating therewith,

on a cylindrical surface centered on the tire axis and intersecting said curved surface, each said concave curve caves axially inwards to have a curvature, and the intersecting line between the curved surface and the cylindrical surface is a waved line, and

said curvature of the concave curve gradually diminishes towards the radially inside from the tread edge.

6. The pneumatic tire according to claim 4, wherein
at the tread edge, the curved surface of each said block has a radius of curvature of 1.5 to 4.5 times the circumferential length of the block.
7. The pneumatic tire according to claim 5, wherein
said rib extends continuously in the tire circumferential direction.
8. The pneumatic tire according to claim 5, wherein
said rib extends continuously in the tire circumferential direction, and
the curved surface is provided along at least 50 % of the circumferential length of the rib.
9. The pneumatic tire according to claim 5, wherein
the peak-to-peak amplitude of said waved line is in a

range of from 1 to 3 mm at the tread edge, and gradually decreases towards the radially inside of the tire.

10. The pneumatic tire according to claim 5, wherein the radius of the convex curve and the radius of the concave curve are in a range of from 8 to 40 % of the ground contacting width at the tread edge.

11. The pneumatic tire according to any of the preceding claims, wherein the tread edge is angled.

12. The pneumatic tire according to any of the preceding claims, wherein the tread edge is rounded.

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